

COMPRESSOR DEFINITION

Designation	EM 2P30CLP
Nominal Voltage/Frequency	220 V 50-60 Hz
Engineering Number	513304624

A - APPLICATION / LIMIT WORKING CONDITIONS

1 Type	Hermetic reciprocating compressor		
2 Refrigerant	R-600a		
3 Nominal voltage and frequency	220 / 50-60	[V / Hz]	
4 Application type	Low Back Pressure		
4.1 Evaporating temperature range	-35°C to -10°C	(-31°F to 14°F)	
5 Motor type	RSIR		
6 Starting torque	LST - Low Starting Torque		
7 Expansion device	Capillary tube		
8 Compressor cooling	Operating voltage range		
		50 Hz	60 Hz
8.1 LBP (32°C Ambient temperature)	Static	198 to 242 V	198 to 242 V
8.2 LBP (43°C Ambient temperature)	Static	198 to 242 V	198 to 242 V
8.3 HBP (32°C Ambient temperature)	-	-	-
8.4 HBP (43°C Ambient temperature)	-	-	-
9 Maximum condensing temperature			
9.1 Operating	6.9	[kgf/cm ²] (98 psig)	/ °C - °F
9.2 Peak	7.8	[kgf/cm ²] (111 psig)	/ °C - °F
10 Maximum winding temperature	130	[°C]	

B - MECHANICAL DATA

1 Commercial designation	1/10	[hp]
2 Displacement	5.19	[cm ³] (0.317 cu.in)
2.1 Bore [mm]	21.000	
2.2 Stroke [mm]	15.000	
3 Lubricant charge	150	[ml] (5.07 fl.oz.)
3.1 Lubricants approved		
3.2 Lubricants type/viscosity	ALQUILB / ISO5	
4 Weight (with oil charge)	7.53	[kg] (16.60 lb.)
5 Nitrogen charge	-	[kgf/cm ²]

C - ELETRICAL DATA

1 Nominal Voltage/Frequency/Number of Phases	220 V 50-60 Hz 1 ~ (Single phase)	
2 Starting device type	PTC	
2.1 Starting device	8EA17C1/8EA17E62/8EA17E63/QPS2-A22MG1 092	
3 Start capacitor	-	[μF(VAC minimum)]
4 Run capacitor	-	[μF(VAC minimum)]
5 Motor protection	4TM142RFBYY-53	
6 Start winding resistance	21.39	[Ω at 25°C (77°F)] +/- 8%
7 Run winding resistance	42.15	[Ω at 25°C (77°F)] +/- 8%
8 LRA - Locked rotor amperage (60 Hz)	4.01/2.82	[A] - Measured according to UL 984
9 FLA - Full load amperage L/MBP (60 Hz)	0.78/0.58	[A] - Measured according to UL 984
10 FLA - Full Load Amperage HBP (60 Hz)	0.87/0.65	[A] - Measured according to UL 984
11 Approval boards certification	CE - TUV - UKCA	

D - PERFORMANCE - CHECK POINT DATA

TEST CONDITIONS: @220V50Hz			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
291	73	85	66	0.52	0.91	4.38	1.10	1.28

TEST CONDITIONS: @220V60Hz			ASHRAELBP32 Static		Evaporating temperature (Condensing temperature		-23.3°C (-9.94°F) 54.4°C (129.92°F)	
Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
329	83	96	70	0.47	1.03	4.70	1.18	1.38

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz			ASHRAE32 Static		(Condensing temperature 35°C (+95°F))				
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	199	50	58	49	0.41	0.62	4.01	1.01	1.18
-30 (-22)	267	67	78	56	0.43	0.84	4.78	1.20	1.40
-25 (-13)	354	89	104	63	0.45	1.11	5.64	1.42	1.65
-20 (- 4)	461	116	135	70	0.47	1.45	6.57	1.65	1.92
-15 (+ 5)	589	148	173	78	0.50	1.85	7.54	1.90	2.21
-10 (+14)	739	186	217	87	0.53	2.33	8.55	2.15	2.50

TEST CONDITIONS: @220V60Hz			ASHRAE32 Static		(Condensing temperature 45°C (+113°F))				
Evaporating temperature	Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C (°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35 (-31)	178	45	52	51	0.42	0.56	3.49	0.88	1.02
-30 (-22)	242	61	71	58	0.44	0.76	4.20	1.06	1.23
-25 (-13)	325	82	95	65	0.46	1.02	4.98	1.25	1.46
-20 (- 4)	428	108	125	74	0.49	1.34	5.79	1.46	1.70
-15 (+ 5)	552	139	162	83	0.52	1.74	6.63	1.67	1.94
-10 (+14)	699	176	205	94	0.55	2.20	7.48	1.88	2.19

E - PERFORMANCE - CURVES

TEST CONDITIONS: @220V60Hz		ASHRAE32 Static			(Condensing temperature 55°C (+131°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	159	40	46	52	0.43	0.50	3.04	0.77	0.89
-30	(-22)	217	55	64	59	0.45	0.68	3.70	0.93	1.09
-25	(-13)	295	74	86	67	0.47	0.93	4.41	1.11	1.29
-20	(- 4)	394	99	115	76	0.49	1.24	5.13	1.29	1.50
-15	(+ 5)	514	130	151	88	0.53	1.62	5.86	1.48	1.72
-10	(+14)	657	165	192	100	0.57	2.07	6.56	1.65	1.92

TEST CONDITIONS: @220V60Hz		ASHRAE32 Static			(Condensing temperature 65°C (+149°F))					
Evaporating temperature		Cooling capacity +/- 5%			Power consumption +/- 5%	Current consumption +/- 5%	Gas flow rate +/- 5%	EFFICIENCY RATE +/- 7%		
°C	(°F)	[Btu/h]	[kcal/h]	[W]	[W]	[A]	[kg/h]	[Btu/Wh]	[kcal/Wh]	[W/W]
-35	(-31)	140	35	41	53	0.44	0.44	2.62	0.66	0.77
-30	(-22)	192	49	56	60	0.46	0.60	3.26	0.82	0.95
-25	(-13)	265	67	78	68	0.48	0.83	3.91	0.99	1.15
-20	(- 4)	359	90	105	79	0.51	1.13	4.56	1.15	1.34
-15	(+ 5)	474	120	139	92	0.55	1.49	5.19	1.31	1.52
-10	(+14)	612	154	179	106	0.60	1.93	5.77	1.45	1.69

F - EXTERNAL CHARACTERISTICS

1 Base plate	European Standard		
2 Tray holder	No		
3 Connectors			
3.1 SUCTION	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.1.1 Material	Copper		
3.1.2 Shape	Slanted 42° up + 45° to Back		
3.2 DISCHARGE	4.94 +0.08/-0.08	[mm]	(0.194" +0.003"/-0.003")
3.2.1 Material	Copper		
3.2.2 Shape	Slanted parallel BP+24°to Back		
3.3 PROCESS	6.5 +0.12/-0.08	[mm]	(0.256" +0.005"/-0.003")
3.3.1 Material	Copper		
3.3.2 Shape	Slanted 45° up + 45° to Back		
3.4 Oil cooler (Copper)	No	[mm]	
3.5 Connector sealing	Rubber Plugs		